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Application No. 10/035,281

What I claim as my invention is:

1. A method of stabilizing and fusing the reshaped lamina after a laminoplasty comprising the steps of:
displacing the severed edge of a lamina,
providing a spacing means with the edges of the said spacing means contoured to engage the lamina and/or facet, and
a fixation means attached to the said spacing means in the middle with curvatures at both ends allowing bone screw placement through both ends of the fixation means
2. The method of claim 1 wherein the said fixation means comprising of an elongated plate with curvature at the ends of the longitudinal axis, downward for fixation to a lamina and upward for fixation to a facet by means of a screw through bone screw receiving holes at each end of the said plate
3. The method of claim 1 wherein the said fixation means comprising of an elongated plate with downward curvature at both ends of the longitudinal axis for fixation to a lamina on each side through bone screw receiving holes at each end of the said plate
4. The method of claim 1 wherein the said fixation means comprising of an elongated plate with downward L-shaped curvature at both ends of the longitudinal axis for fixation to a lamina or facet on each side through bone screw receiving holes at each end of the said plate
5. The method of claim 1 wherein the said spacing means comprising of a rectangular shape with concave curved edges contoured at the longitudinal ends to allow for engagement between the lamina
6. The method of claim 1 wherein the said spacing means comprising of a rectangular

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- shape with both edges at the end of the longitudinal axis of the said spacer have a superior cuff to allow for engagement between the lamina
7. The method of claim 1 wherein the said fixation means is made from a component taken from the following group: titanium, titanium alloy, surgical steel, polymeric material, ceramic material, resorbable material, polyglyconate, bone, hydroxyapatite
8. The method of claim 1 wherein the said spacing means is made from a component taken from the following group: allograft bone, xenograft bone, autograft bone, hydroxyapatite, resorbable material, bicompatible material suitable for bone fusion
9. A spacer for the lamina of the spine after laminoplasty comprising of a rectangular shape wherein both edges at the end of the longitudinal axis of the said spacer have a superior cuff to allow for engagement between the lamina
10. The said spacer of claim 9 is hollow with openings at both side ends; the said hollow spacer can be packed with a bone fusion material selected from the group consisting of autograft bone, allograft bone, xenograft bone, bone morphogenic protein, and hydroxyapatite
11. The said spacer of claim 9 is made from a component taken from the following group: allograft bone, xenograft bone, autograft bone, hydroxyapatite, resorbable material, bicompatible material suitable for bone fusion
11. A spacer for the lamina of the spine after laminoplasty comprising of a rectangular shape with concave curved edges contoured at the longitudinal ends to allow for engagement between the lamina, and composed of cortical bone on the surface and cancellous bone in the center
12. A method of stabilizing the reshaped lamina after a laminoplasty comprising the steps

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of:

displacing the severed edge of the lamina at the junction of the lamina and facet,
a fixation means comprising of a plate with appendages at either ends prior to the
curvature of the longitudinal axis of the said fixation means to secure the lamina on one
side and the facet on the other and maintain their repositioned shape along with fixation
of the plate to the lamina and facet via bone fasteners

13. The said plate of claim 12 wherein one of the said appendages is curved at one end
and another is straight at the other end perpendicular to the longitudinal plate axis and
prior to the curvature at both ends

14. The said plate of claim 1 wherein the said appendage is curved at one end
perpendicular to the longitudinal plate axis and prior to the curvature

15. The said plate of claim 1 is made from a component taken from the following group:
titanium, titanium alloy, surgical steel, polymeric material, ceramic material, resorbable
material, polyglyconate, bone, hydroxyapatite

16. A method of stabilizing and fusing the repositioned lamina after a laminoplasty
comprising the steps of:

displacing the severed edges of lamina at the junction of the lamina and facet on both
sides,

providing a spacing means with the edges of the said spacing means contoured to engage
between the lamina and facet on both sides of the vertebra,

a fixation means with the said spacing means attached in the middle contoured to allow
bone screw placement through one end of the said fixation means to the lamina and bone
screw placement through the other end of the said fixation means to the facet on both

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sides of the vertebra

17. A method of stabilizing the reshaped lamina after a laminoplasty comprising the steps of:

displacing both lamina through severed edges in the middle,
providing fixation means comprising of a plate with two appendages perpendicular to the longitudinal axis of the said fixation means spaced apart in the middle to engage the lamina on either side with the said fixation means also comprising of curvatures at both ends to secure the fixation means to the lamina and/or facets on both sides with bone fasteners

18. The said plate of claim 17 wherein the said appendage is curved in the middle perpendicular to the longitudinal plate axis and prior to the curvature at both ends to secure the lamina

19. The said plate of claim 17 wherein the said appendages are straight in the middle perpendicular to the longitudinal plate axis and prior to the curvature at both ends

20. The said plate of claim 17 comprising of said curvatures which are L-shaped at the end on both sides to allow for fixation to the facets by means of bone fasteners

21. A bone stabilization device of claim 17 wherein said plate has a plurality of bone screw receiving holes throughout the plate

22. The said plate of claim 17 is made from a component taken from the following group: titanium, titanium alloy, surgical steel, polymeric material, ceramic material, resorbable material, polyglyconate, bone, hydroxyapatite